

REMARKS

Claims 1-8, 10-16 and 19 remain pending. Claims 17-18 were previously canceled without prejudice. Claim 9 is hereby canceled without prejudice. Claims 1, 10, 11, 16, and 19 are hereby amended. No new matter is being added.

35 USC 103

Claims 1-8, 10-16 and 19 were rejected under Section 103 as being unpatentable over De Silva et al (De Silva) in view of Hurren et al (Hurren). Applicant respectfully traverses the rejection with respect to the claims as they are now amended.

Amended claim 1 recites as follows.

1. A method of processing a packet sent to a provider network, the method comprising:
 - receiving the packet via a first user port at a first edge switch of the network, wherein the first user port is an **input** port of the first edge switch;
 - determining forwarding and routing by the first edge switch based on a user VLAN identifier (VID) of a user VLAN tag for the packet;
 - creating a tunnel from the first user port at the first edge switch to a second user port at a second edge switch** using double VLAN tagging by inserting a provider VLAN tag, including a provider VID, into the packet at a first provider port at the first edge switch prior to transmission of the packet via the first provider port and stripping the provider VLAN tag from the packet after the packet is received by a second provider port at the second edge switch, wherein the first provider port is an output port of the first edge switch, wherein the second provider port is an input port of the second edge switch, and wherein the second user port is an **output** port of the second edge switch; and

providing a user-expected service level in relation to traffic flowing through said tunnel.

(Emphasis added.)

As shown above, claim 1 recites **“creating a tunnel from the first user port at the first edge switch and a second user port at a second edge switch** using double VLAN tagging by inserting a provider VLAN tag, including a provider VID, into the packet at a first provider port at the first edge switch prior to transmission of the packet via the first provider port and stripping the provider VLAN tag from the packet after the packet is received by a second provider port at the second edge switch, wherein the first provider port is an output port of the first edge switch, wherein the second provider port is an input port of the second edge switch, and wherein the second user port is an output port of the second edge switch”. (Emphasis added.)

The claim language finds support in the original specification. For example, page 2, lines 14-17 recites as follows. “The double Q tagging is utilized to create a tunnel between a user port of a first switch and a user port of a second switch. In accordance with the embodiment, a user-expected service level is provided in relation to traffic flowing through the tunnel.” Support for the tunnel creation by inserting a provider VLAN tag at the provider port of the first edge switch is found in FIG. 4 and related description. For convenience of reference, FIG. 4 is reproduced below.

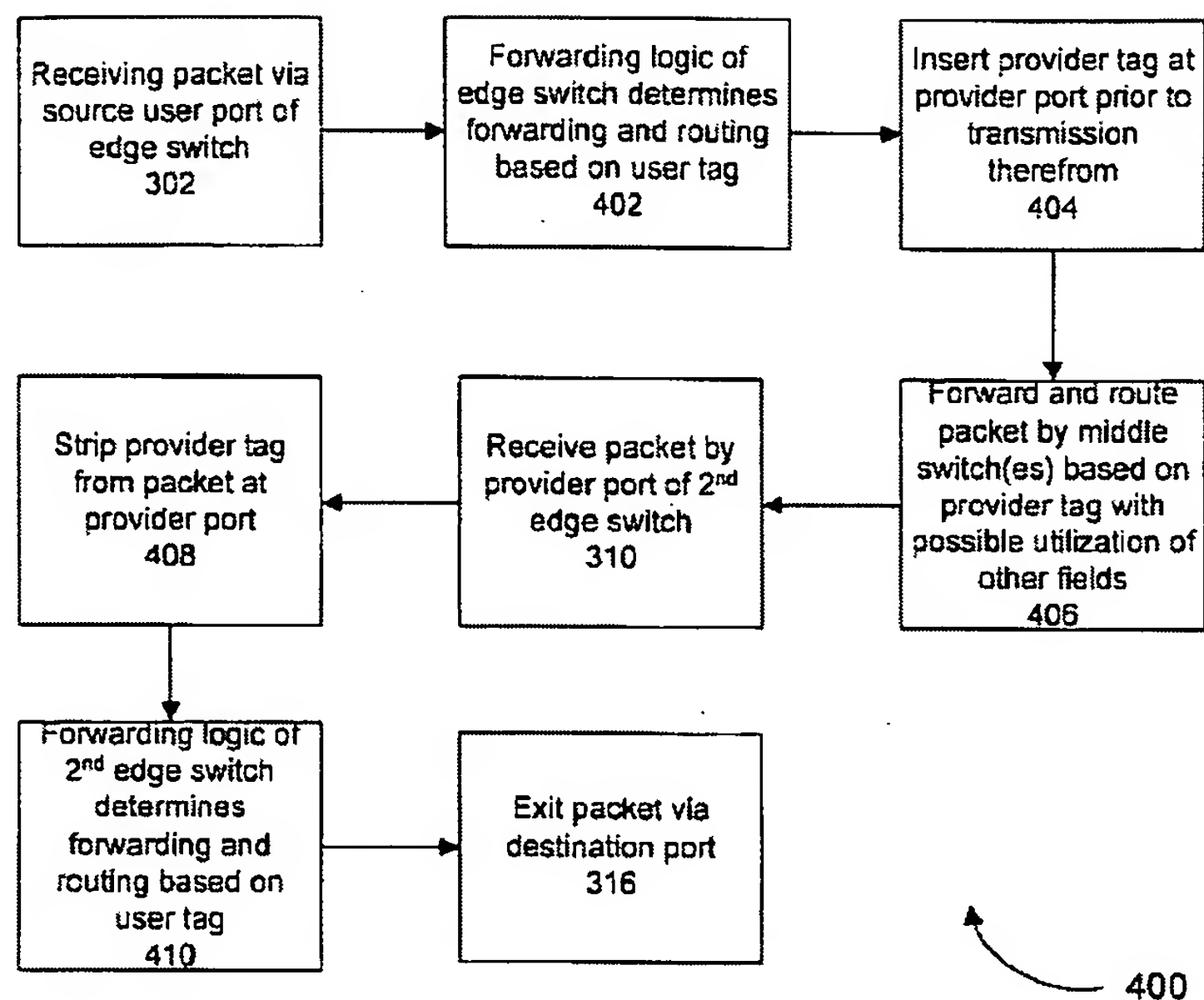


FIG. 4

Applicant respectfully submits that the cited references do not teach or disclose the above-referenced claim limitation. Specifically, the cited references do not teach or disclose “**creating a tunnel from the first user port at the first edge switch to a second user port at a second edge switch** using double VLAN tagging by inserting a provider VLAN tag, including a provider VID, into the packet at a first provider port at the first edge switch prior to transmission of the packet via the first provider port and stripping the provider VLAN tag from the packet after the packet is received by a second provider port at the second edge switch, wherein the first provider port is an output port of the first edge switch, wherein the second provider port is an input port of the second edge switch, and wherein the second user port is an output port of the second edge switch”. (Emphasis added.)

In relation to the “creating a tunnel ...” limitation of claim 1, the latest office action cites to paragraph 78 of De Silva. In particular, the citation points to the “communication channel” between switch 226 and switch 232. However, applicant respectfully points out that the “communication channel” between switch 226 and switch 232 in De Silva is simply a **direct link** (not a tunnel) from a **provider** port (the

output port P2) of the first switch (226) to a **provider** port (the **input** port) of the second switch (232). In contrast, the claim language recites a **tunnel** from the first **user** port (an **input** port) at the first edge switch to the second **user** port (an **output** port) at the second edge switch.

Notice that the communication channel per paragraph 78 of De Silva goes from an output port to an input port, both ports being **provider** ports. Meanwhile, the claimed tunnel goes from an input port to an output port, both ports being **user** ports.

Therefore, for at least the above-discussed reasons, applicant respectfully submits that amended claim 1 overcomes this rejection and is patentably distinguished over the cited art.

Claims 2-8 and 10 depend from claim 1. Hence, applicant respectfully submits that claims 2-8 and 10 also overcome their rejections for at least the same reasons discussed above in relation to claim 1.

Independent claim 11 is an apparatus claim which recites “that a **tunnel** is created from the **user** port of the switch to another **user** port of a different switch apparatus.” (Emphasis added.) Claim 11 further specifies that the former user port is an input port. As discussed above, the communication channel per paragraph 78 of De Silva goes from an output port to an input port, both ports being **provider** ports. Meanwhile, the claimed tunnel goes from a user port to another user port. Therefore, applicant respectfully submits that claim 11 overcomes this rejection and is patentably distinguished over the cited art.

Similarly, independent claim 12 recites that “a **tunnel** is created between the **user** port of the first switch and a **user** port of the second switch.” (Emphasis added.) As discussed above, the communication channel per paragraph 78 of De Silva goes from an output port to an input port, both ports being **provider** ports. Meanwhile, the claimed tunnel goes from a user port to a user port. Therefore, applicant respectfully submits that previously-presented claim 12 overcomes this rejection and is patentably distinguished over the cited art.

Claims 13-15 depend from claim 12. Hence, applicant respectfully submits that claims 13-15 also overcome their rejections for at least the same reasons discussed above in relation to claim 12.

Independent claim 16 recites “to create a **tunnel** between a **user** port of the first switch and a **user** port of a second switch.” (Emphasis added.) As discussed above, the communication channel per paragraph 78 of De Silva goes from an output port to an input port, both ports being **provider** ports. Meanwhile, the claimed tunnel goes from a user port to a user port. Therefore, applicant respectfully submits that claim 16 overcomes this rejection and is patentably distinguished over the cited art.

Similarly, independent claim 19 recites that “a **tunnel** is created between the **user** port of the edge switch and a **user** port of a different edge switch.” (Emphasis added.) As discussed above, the communication channel per paragraph 78 of De Silva goes from an output port to an input port, both ports being **provider** ports. Meanwhile, the claimed tunnel goes from a user port to a user port. Therefore, applicant respectfully submits that claim 19 overcomes this rejection and is patentably distinguished over the cited art.

Conclusion

For the above-discussed reasons, applicant respectfully submits that the pending claims now overcome the rejection from the latest office action. Favorable action is respectfully requested.

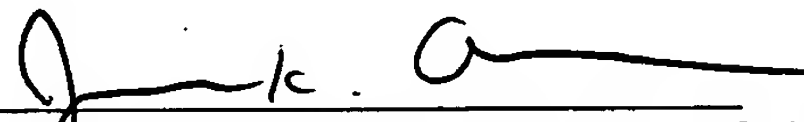
The Examiner is also invited to call the below-referenced attorney to discuss this case.

Respectfully Submitted,

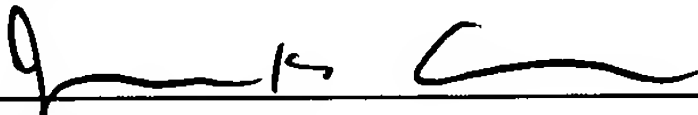
Alan Albrecht

Dated:

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